

Abstract of the Disclosure

A cooling device with micro cooling fins is provided. The cooling device includes a substrate, a plurality of vibrating type cooling fins extending from the substrate, and a blast fan for ventilating the substrate to cool the substrate and the vibrating type cooling fins and for causing the vibrating type cooling fins to vibrate. Accordingly, micro cooling fins formed on the surface of a substrate change the flowing path of the air and improve the performance of heat transfer near the surface of the substrate due to their vibration. In other words, the resistance to heat transfer is decreased and the performance of heat transfer is improved by disturbing the formation of a heat boundary layer, which is formed on a smooth surface. Since the cooling device provides improved heat transfer performance compared to an existing cooling device, an area and volume for heat transfer can be decreased so that the cooling device can be miniaturized.